

Singapore Management University

## Institutional Knowledge at Singapore Management University

---

Research Collection Lee Kong Chian School of  
Business

Lee Kong Chian School of Business

---

2-2018

### The other side: Occupational interactional requirements and work-home enrichment

Devasheesh P. BHAVE

*Singapore Management University*, [dbhave@smu.edu.sg](mailto:dbhave@smu.edu.sg)

Alexandru M. LEFTNER

*Concordia University*

Follow this and additional works at: [https://ink.library.smu.edu.sg/lkcsb\\_research\\_all](https://ink.library.smu.edu.sg/lkcsb_research_all)



Part of the [Human Resources Management Commons](#), and the [Organizational Behavior and Theory Commons](#)

---

#### Citation

BHAVE, Devasheesh P. and LEFTNER, Alexandru M.. The other side: Occupational interactional requirements and work-home enrichment. (2018). *Academy of Management Journal*. 61, (1), 139-164. Available at: [https://ink.library.smu.edu.sg/lkcsb\\_research\\_all/24](https://ink.library.smu.edu.sg/lkcsb_research_all/24)

This Journal Article is brought to you for free and open access by the Lee Kong Chian School of Business at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Research Collection Lee Kong Chian School of Business by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email [cherylds@smu.edu.sg](mailto:cherylds@smu.edu.sg).

## THE OTHER SIDE: OCCUPATIONAL INTERACTIONAL REQUIREMENTS AND WORK–HOME ENRICHMENT

DEVASHEESH P. BHAVE  
Singapore Management University

ALEXANDRU M. LEFTER  
Concordia University

**We examine how occupational interactional requirements influence work–home enrichment. We conceptualize “occupational interactional requirements” as restorative properties of jobs that provide employees with resources that they transfer to the home domain. We identify two manifestations of work–home enrichment: (1) through objective indicators of how employees allocate their time at home, and (2) through employees’ perceptual reflections of their work–home enrichment. In terms of objective indicators, our results indicate that employees transfer these resources by spending more time in resource-draining activities such as caring for family, and less time in resource-replenishing activities such as socializing and relaxing. This suggests that occupational interactional requirements facilitate a reallocation of time in the home domain. In terms of perceptual reflections, we observe that occupational interactional requirements spark employees’ vitality, which, in turn, enriches their life at home. Our results attest to considering workplace interactions as resource-replenishing features of jobs that provide benefits across the work–home interface.**

An increasingly services-based economy has spawned the primacy of interpersonal interactions in the workplace (see Grandey, Diefendorff, & Rupp, 2013). Hochschild’s (1983) seminal study on flight attendants sparked research—encapsulated in the domain of emotional labor (EL)—that examined the experience of employees working in jobs with significant *occupational*

*interactional requirements*.<sup>1</sup> Since then, a prevailing assumption in EL research is that workplace interactions are depleting and result in burnout for service providers (Grandey, Rupp, & Brice, 2015; Hochschild, 1983). According to this view, occupations have interactional requirements that involve adherence to display rules, and this process emotionally exhausts service providers (Hochschild, 1983). This assumption, however, has been recently challenged through multiple arguments drawn from work design, recovery, as well as emerging EL research (Grant & Parker, 2009; Lilius, 2012; Wharton, 2009; see also Grandey et al., 2013).

---

We would like to thank our editor, Brent Scott, and the team of reviewers for their guidance and helpful suggestions. We are also grateful to Chris Barnes, Reeshad Dalal, Gerry George, Theresa Glomb, Gary Greguras, and Abhijeet Vadera for their insights at different stages of this study. We presented early versions of this paper at the Academy of Management conference (included in *Academy of Management Proceedings 2016*), the Administrative Sciences Association of Canada conference, and Singapore Management University’s Research Seminar series, and we would like to thank participants in these meetings for their ideas and questions. This research received financial support from Singapore Management University’s Internal Research Grant (C207/MSS15B009). The authors contributed equally.

---

<sup>1</sup> Different terms have been used to refer to the *job-level* requirements to engage in workplace interactions. Wharton (2009) used the term “interactional demands,” Glomb, Kammeyer-Mueller and Rotundo (2004) and Bhave and Glomb (2009) used the term “emotional labor demands,” and Grandey et al. (2013) and Bhave and Glomb (2016) used the term “EL as occupational requirements.” For simplicity, to integrate alternate terms and clearly focus on the interactional element of jobs, we employ the term “occupational interactional requirements.”

One view—drawn from work design research—contends that interactions, particularly those in which employees can interact with the beneficiaries of their work, are motivational and enhance employee well-being (Grant, 2007). A second view—drawn from recovery research—highlights the episodic nature of work and envisions interactions as breaks during the course of the work day that have restorative capabilities (Beal, Weiss, Barros, & MacDermid, 2005; Lilius, 2012). A third view—based on the occupational stream of EL research—observes that “there is little evidence that job characteristics or work demands related to interaction are themselves sources of burnout or dissatisfaction,” and that “many studies report positive consequences for workers whose *jobs* require high levels of interactions with others” (Wharton, 2009: 160, italics added). Collectively, these arguments converge on a key contention: occupational interactional requirements may have restorative properties that are desirable for employee well-being.

If so, an important question remains to be addressed: if working in occupations with high interactional requirements is purportedly energizing, does this energy transfer to the home domain? Relatedly, into which facets of the home domain is this energy channeled? Put simply, could occupational interactional requirements enrich employees’ lives at home? To address these questions, we integrate conservation of resources (COR) theory (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014; Hobfoll, 1989) and self-determination theory (SDT) (Gagné & Deci, 2005; Ryan & Deci, 2000), and theorize that interactional requirements represent contextual social resources that can spark personal resources of vitality. These vitality resources are useful beyond the work domain because they can transfer to the home domain (ten Brummelhuis & Bakker, 2012) and enhance the quality of employees’ lives at home (Eby, Maher, & Butts, 2010; Greenhaus & Powell, 2006). This line of reasoning is also embedded in emerging models in work–family research that focus on work–home enrichment—how experiences at work can enhance the quality of life (i.e., affect or performance) at home (Eby et al., 2010; Greenhaus & Powell, 2006; Rothbard, 2001).

Investigating the questions above is important because employees’ potentially lower quality of life at *home* is acknowledged as a manifestation of their resource depletion on account of *work* (Ilies, Schwind, Wagner, Johnson, DeRue, & Ilgen, 2007). If, however, workplace interactions are restorative, they should enhance the quality of employees’ lives

at home such that they spend more time on those activities at home that are inherently resource draining (e.g., taking care of household members), and less time on those activities at home that are inherently resource replenishing (e.g., recreation). That is, we propose that the vitality resources gleaned by engaging in workplace interactions will result in work–home enrichment. Because time allocation sheds light on family routines (Wight, Raley, & Bianchi, 2008), and because time is a finite personal resource (Halbesleben et al., 2014; Hobfoll, 1989) that can be assessed in meaningful units (e.g., minutes, hours), it can directly reveal the potential inter-domain transfer of vitality resources and provide an objective indicator of work–home enrichment (Edwards & Rothbard, 2000; Greenhaus & Powell, 2006). As such, economists consider time allocation to also provide insight into employees’ subjective well-being (Krueger, Kahneman, Fischler, Schkade, Schwarz, & Stone, 2009).

We conduct three studies to test our research questions. In Study 1, in a sample of more than 17,000 full-time workers employed in over 400 occupations, we investigate whether workplace interactions spark different allocations of time to activities in the home domain. In so doing, we aim to provide objective indicators of whether the quality of employees’ home lives is enhanced. To supplement this objective assessment of work–home enrichment, in Study 2, using two-wave longitudinal data, we focus on employees’ perceptual reflections of work–home enrichment. Specifically, we test the proposed mechanism of vitality resources as an underlying link of why occupational interactional requirements can result in work–home enrichment. Finally, to better understand the dynamic interplay of occupational interactional requirements and work–home enrichment at the within-person level, in Study 3, we reassess the mediating effect of state vitality using an experience sampling methodology. Taken together, these studies highlight the *other side* of occupational interactional requirements by identifying how they influence employees’ time allocation across different activities at home, and, more generally, how they contribute to work–home enrichment.

Investigating the other side of occupational interactional requirements plays a key role in the conceptualization and design of employee recovery activities both at work and at home because, conventionally, employees working in occupations with high interactional requirements are considered to be depleted at work, and thus to possess a greater need

for recovery (Lilius, 2012). Accordingly, organizational interventions geared toward employee recovery focus on respites at work in the form of breaks (Trougakos & Hideg, 2009) and at home in the form of leisure activities after work (Sonnentag, 2003; Sonnentag & Fritz, 2007), or on longer breaks in the form of weekends and vacations (Kühnel & Sonnentag, 2011). Yet, recognizing the restorative properties of workplace interactions helps envision employees' work itself as an occasion of recovery (Lilius, 2012). This perspective has important implications for understanding how work is designed, how recovery should be structured at work and at home, and how employee engagement can be effected (see also Bakker, Oerlemans, & ten Brummelhuis, 2013; Grant, 2007; Lilius, 2012; Trougakos & Hideg, 2009).

### HYPOTHESES DEVELOPMENT

We develop our theoretical framework along the following lines. First, we outline the different lenses used in EL research to emphasize our focus on the lens of occupational interactional requirements. Next, we integrate the motivational perspectives of COR theory and SDT, and propose a conceptualization of occupational interactional requirements as contextual social resources that may stem resource losses and facilitate resource gains. We then integrate this resource perspective with that of the work-home interface to illustrate the transfer of contextual social resources from the work to the home domain.

#### **Lenses in Emotional Labor Research: Occupational Interactional Requirements and Their Positive Effects on Employee Well-Being**

Grandey and colleagues (2013) outlined that three distinct lenses—EL as occupational requirements, EL as emotional displays, and EL as intrapsychic processes—have been used in EL research. The lens of “EL as emotional displays” focuses on the automatic or conscious expression of emotions that are mandated by the job (e.g., smiling at customers; Rafaeli, 1989), whereas the lens of “EL as intrapsychic processes” focuses on the emotion regulation processes undertaken by employees when performing their work roles (e.g., “pretend to have emotions that I don't really feel,” Brotheridge & Lee, 2002: 62). Through primary studies (Brotheridge & Lee, 2002; Gabriel & Diefendorff, 2015) as well as meta-analytic work (Hülshager & Schewe, 2011;

Kammeyer-Mueller et al., 2013), research based on these two lenses has revealed that emotion regulation, particularly response-focused emotion regulation (i.e., surface acting), is related to lower employee well-being. Our emphasis, however, is on the lens of “EL as occupational requirements” (i.e., occupational interactional requirements), which focuses on the broader phenomenon of interactive jobs (e.g., the extent to which the *job* involves “performing for or working directly with the public”; Glomb et al., 2004: 706; see Grandey et al., 2013).

There are two key reasons why we chose to lay emphasis on the occupational interactional requirements lens. First, as noted above, there is evidence that occupational interactional requirements may have beneficial outcomes for employees at work. The boundaries of such potentially beneficial interactions, however, are unclear (see Grandey & Gabriel, 2015). That is, we assess whether workplace interactions could serve as instances of recovery at work (Lilius, 2012), and whether this resource restoration at work influences employees' lives at home. By integrating work-home enrichment and occupational EL research, we expand our knowledge of how interactional requirements affect the work-home interface by unveiling the effects of occupational interactional requirements that employees experience after leaving work (see Wagner, Barnes, & Scott, 2014).

In so doing, we also intend to achieve a second objective: to explicitly consider the “interactive dynamics in emotional labor,” and address Wharton's (2013: 301) concern that a lack of research focus on occupational interactional requirements has resulted in “the study of emotional labor [becoming] somewhat disconnected from the jobs, workplaces, and organizational settings that help define its particular characteristics and expressions.” Occupations represent an important context that shapes employees' attitudes and behaviors independent of organizational norms and practices (Johns, 2006). Thus, an occupational perspective can provide insight into employees' experiences across a range of interactive work contexts—beyond only considering customer service workers (Ashforth & Humphrey, 2013)—with varying levels of interactional requirements (Ashkanasy & Daus, 2013; Wharton, 2009) and their putative effects (Lilius, 2012).

Grandey and colleagues (2013: 7) highlighted that three key characteristics of interactive jobs are that they involve “frequent interactions with the public,

the expectation of inducing emotions in others, and the management or control of these emotional interactions.” They clarified that jobs need not possess all three characteristics—even if jobs possess one or two of these characteristics, it may suffice to consider them as interactive jobs (Grandey et al., 2013). For instance, jobs that involve frequent interactions with coworkers, supervisors, and team members also embody the characteristics of interactive jobs (Kim, Bhawe, & Glomb, 2013; Wharton, 2009), and thus interactional requirements exist in virtually every job, even though they may vary considerably across jobs (Bhawe & Glomb, 2009; Glomb et al., 2004; Grandey et al., 2013).

**Alternative views of the effects of occupational interactional requirements.** Research on occupational interactional requirements has primarily been conducted in sociology and relied on qualitative approaches (Grandey et al., 2013). In a seminal study, Hochschild (1983) observed that employees in interactive jobs had to adhere to organizationally mandated displays of emotions, which made them more susceptible to stress and burnout. Accordingly, in addition to Hochschild’s (1983) work on flight attendants and bill collectors, other qualitative studies, particularly those set in discrete occupational contexts (e.g., paralegals, Lively, 2000; social workers, Karabanow, 1999), reported that occupational interactional requirements resulted in greater employee stress and lower employee well-being.

Although there is little evidence that directly links the effects of working in interactive jobs to work-home enrichment, related research has suggested that interactional requirements could result in fatigue at work, which may adversely impact the family domain. For instance, Kanter (1977: 50) speculated that employees in “high-interaction occupations” may experience “interaction fatigue,” and, as a consequence, “withdraw from contact at home.” Building on this viewpoint, Wharton and Erickson (1993) theorized that high requirements to manage emotions at work could increase the role overload that employees experience in the home domain.

Other qualitative work has reported alternate, mixed views of working in interactive jobs. For instance, Tolich (1993) observed that supermarket clerks perceived their interactions with customers to provoke both stress and satisfaction. Supermarket clerks enjoyed interacting with customers because it helped them alleviate the repetitiveness and monotony of their jobs, and also because it helped them

form fulfilling relationships with their customers. In a similar vein, Leidner (1993) observed that, although the routines and scripts that fast food workers had to adhere to could enhance feelings of inauthenticity, those routines also served as a bulwark against customer mistreatment—and associated stress—and shaped new personal identities. More generally, findings from studies that have focused on job-level differences suggest that employees working in jobs with high interactional requirements “were *not* more likely to feel burned out than employees in other jobs” (Grandey et al., 2013: 10, emphasis in original).<sup>2</sup>

Mounting evidence is supportive of this viewpoint and indicates that workplace interactions provide both motivational (Grant, 2007) and physiological (Heaphy & Dutton, 2008) resources that energize employees and enhance their well-being (Grant, 2008; Grant & Parker, 2009; Humphrey, Nahrgang, & Morgeson, 2007). Furthermore, such interactive jobs possess identity-affirming potential because they provide a context for employees to perform actions that are congruent with their identity (Ashforth & Humphrey, 1993). An illustration of this line of reasoning is the qualitative work of Curley and Royle (2013) on flight attendants, which reported that experienced flight attendants resented managerial changes that lowered their interactional requirements because they made them perceive themselves as “unskilled trolley-doll[ies]” rather than the “skilled emotion manager[s]” they viewed themselves to be (p. 118). Consistent with Ashforth and Humphrey’s (1993) theorizing, this finding suggests that interactional requirements may “be a source of satisfaction and be associated with the protection and assertion of self-identity” (Curley & Royle, 2013: 118; see also Humphrey, Ashforth, & Diefendorff, 2015). Analogous findings highlight that occupational interactional requirements are positively related to feelings of personal accomplishment (Brotheridge & Grandey, 2002) and job satisfaction (Bhawe & Glomb, 2016; Wharton, 1993).

<sup>2</sup> In light of these alternate findings, as suggested by a reviewer, occupational interactional requirements could be conceptualized as analogous to the notion of challenge stressors. Challenge stressors are job attributes that could be stressful but are appraised by employees to be linked to their personal advancement, and so elicit positive emotions and are associated with higher employee motivation and performance (LePine, Podsakoff, & LePine, 2005).

## Occupational Interactional Requirements as Contextual Social Resources: Integrating COR Theory and SDT

The conceptualization of occupational interactional requirements as potentially desirable properties of jobs has resonance from a resource conservation perspective. COR theory posits that employees are motivated to retain existing resources and acquire new ones (Hobfoll, 1989). There are two broad categories of resources: contextual resources (e.g., social support, job autonomy) and personal resources (e.g., mood, physical energy) (Hobfoll, 1989; ten Brummelhuis & Bakker, 2012). Hobfoll (1989) emphasized that resources provide value for each person, and people are driven to avoid resource losses. One way that people can restore losses in their personal resources is through occasions that facilitate resource restoration, such as work breaks, weekends, and vacations (Sonnetag, 2003; Trougakos & Hideg, 2009). There is also evidence, however, that resource restoration through shorter breaks, even if they are discretionary, may be insufficient (see Trougakos & Hideg, 2009), and that resource restoration through longer breaks can fade out (Westman & Eden, 1997). Thus, although both short and long breaks are useful for employee recovery, they provide only a partial solution to recoup personal resource losses.

In integrating diverse research streams, Lilius (2012) opened up a new line of inquiry that focuses on work activities themselves as occasions of resource restoration. Lilius (2012) highlighted that interactions could be resource replenishing by generating significant personal resources, and requiring fewer regulatory resources (i.e., the limited stock of resources that each person has for exerting self-control, which could be depleted when engaging in actions that require repeated acts of self-control; Baumeister, Vohs, & Tice, 2007). Lilius (2012) detailed that engaging in interactions can provide employees with an avenue through which to enhance their positive affect, experience meaningfulness in their work, and affirm their identity. Interactions thus possess replenishing potential because they can serve the dual purpose of strengthening people's capacity of self-control and generating desirable personal resources for them (Lilius, 2012).

The notion that work could serve to replenish resources has considerable support from both COR and SDT perspectives. In COR theory, Hobfoll (1989) highlighted that one of the most effective ways to gain resources is through social relations

that are integral in workplace interactions (Hobfoll, 1989)—such social resources are considered a form of contextual resources (ten Brummelhuis & Bakker, 2012). In clarifying Hobfoll's (1989) conceptualization of resources, Halbesleben and colleagues (2014) suggested that, rather than solely being valuable for their own sake, resources also facilitate goal attainment. This redefinition of resources facilitates a clearer focus on resource acquisition as an end in itself, and aligns with perspectives from SDT that focus on "resource maintenance and enhancement of energy or vitality" (Ryan & Deci, 2008: 702).

A goal attainment perspective of resources brings to the forefront a key objective that people have at work: relatedness or connection with others (Gagné & Deci, 2005; Ryan & Deci, 2000). SDT identifies relatedness, along with autonomy and competence, as one of three basic psychological needs that people have at work, the fulfillment of which is fundamental for people's psychological health (Gagné & Deci, 2005). When people engage in activities, or work in contexts, that facilitate the fulfillment of their basic needs, such as engaging in workplace interactions, their vitality—the "energy available to the self"—is enhanced, and this gain can be deployed toward goal attainment (Ryan & Deci, 2008: 711). In COR terminology, "vitality" represents the personal resource category of "energies" that may manifest as mood, attention, or physical energy (Halbesleben et al., 2014; ten Brummelhuis & Bakker, 2012), and which SDT demonstrates to be crucial for employees' psychological health, productivity, and resilience (Ryan & Deci, 2008). In sum, by integrating perspectives from COR theory and SDT, we reason that, by providing an avenue to fulfill relatedness needs, occupational interactional requirements serve as contextual social resources that spark personal resources of vitality (i.e., they represent replenishing interactions; Lilius, 2012).

### Resource Generation, Resource Transfer, and Work–Home Enrichment

Thus far, we have argued that occupational interactional requirements represent contextual social resources that can trigger employees' vitality—their personal resources. According to COR theory, these resource gains—arising in the work domain—are useful to defray resource losses and to make resource investments (e.g., coping). Ten Brummelhuis and Bakker (2012) extended the boundaries of COR theory to delineate how resource gains in the work domain are beneficial for outcomes in the home

domain. This line of theorizing builds on emerging models in work–family research that focus on work–home enrichment and seek to identify how experiences at work could enhance the quality of employees' lives at home (Eby et al., 2010; Greenhaus & Powell, 2006). Specifically, enrichment occurs when resources (e.g., interpersonal skills) gleaned at work directly facilitate performance improvement at home (i.e., the instrumental path), or indirectly enhance performance at home by first triggering positive affect (i.e., the affective path; Greenhaus & Powell, 2006). In line with Rothbard (2001), our focus is on the affective path: if positive emotions are triggered in performing the work role, these positive emotions will facilitate perspective taking, engaging in interpersonal helping, and undertaking other-directed—rather than self-focused—activities in the family role. More importantly, positive emotions will limit the necessity to engage in self-regulation and instead “lead to energy expansion,” which can be gainfully divested in performing the family role (Rothbard, 2001: 662).

In accordance, ten Brummelhuis and Bakker (2012) suggested that contextual resources are proximal triggers for personal resources (such as vitality), and that these personal resources, although generated and partially used in the work domain, are also likely to be beneficial in the home domain. For instance, social support offered by work colleagues represents a contextual resource wherein the help provided by coworkers facilitates task completion, and generates associated personal resources of positive emotions and feelings of accomplishment; these personal resources could then be fruitfully invested in the home domain (ten Brummelhuis & Bakker, 2012). Work–home enrichment may thus occur because of the inter-domain resource transfer (Greenhaus & Powell, 2006; ten Brummelhuis & Bakker, 2012). Other illustrations of work–home enrichment include a range of positive outcomes in the home domain such as improvements in marital quality and increases in the time that employees spend in caring for their children, all of which could be created by contextual resources in the work domain (e.g., income, job autonomy, flexible work environment; Greenhaus & Powell, 2006). In a similar vein, we propose that contextual social resources—arising on account of occupational interactional requirements—generate personal vitality resources that can be deployed in the home domain to enhance the quality of life at home (see Figure 1).

If employees have higher vitality as a result of their work, how will they enrich their life at home? More specifically, how will they allocate their time after

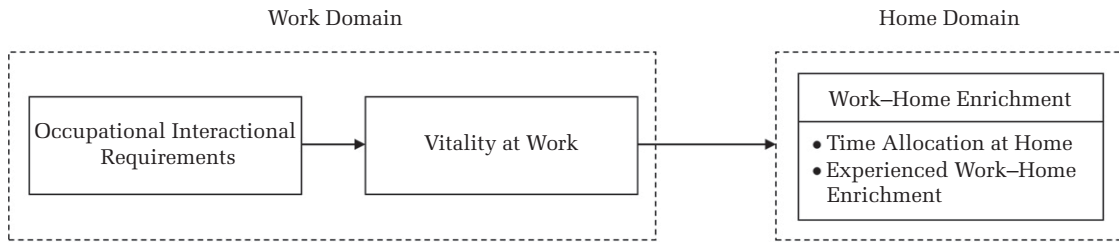
they return home? To answer these questions, it is essential to consider how employees, in general, allocate their time. Historically, economics research considered that people allocate their time to two broad activities: labor (work) and leisure (Robbins, 1930). However, the limitations of this categorization of activities are widely acknowledged in contemporary economics research (Gronau, 1977; see Kimmel & Connelly, 2007), and current conceptualizations identify five broad areas where time can be allocated: (1) work, (2) caring for family (e.g., taking care of children, helping with children's homework), (3) housework (e.g., cleaning, food preparation), (4) leisure (e.g., reading, relaxing, watching television), and (5) “other” activities (sleep, shopping, education, volunteering, personal care) (Kimmel & Connelly, 2007). Because we are concerned with the inter-domain transfer of resources from work to home, in the present research, we explicitly focus on time spent caring for family, time spent undertaking housework, and time spent in leisure.<sup>3</sup>

Specifically, we propose that, based on the type of activity, personal vitality resources have functional utility in two ways: they may serve as supplements or as substitutes (see Figure 2). Caring for family and performing housework are both activities that require considerable resources (Sonnetag, 2001). However, these two activities differ in that caring for family is an other-directed, enriching activity, whereas performing housework is generally an obligatory, maintenance activity (Bianchi, 2011; Rook & Zijlstra, 2006). Regardless, because both are activities involving significant physical effort that can cause fatigue (Sonnetag, 2001; Sonnetag & Zijlstra, 2006), we reason that, in order to undertake these activities, vitality resources will have a generative role and function as supplements. That is, drawing on their increased vitality resources, employees will allocate greater time to caring for family and to performing housework activities.

Conversely, engaging in leisure activities should facilitate recovery and personal resource gains because these are enriching, low-effort activities (Rook & Zijlstra, 2006; Sonnetag, 2001; Sonnetag & Fritz, 2007). We reason that, when engaging in leisure activities, vitality resources will continue to play a generative role, but will function as substitutes. Because of their preexisting higher levels of vitality,

<sup>3</sup> The category of “other” encompasses a range of diverse activities that precludes us from offering any hypothesis. Thus, in line with Kimmel and Connelly (2007), we do not focus on this category of activities.

**FIGURE 1**  
**Conceptual Model**



employees’ will have fewer requirements to replenish resources through unwinding and leisure (Greenhaus & Powell, 2006; Rothbard, 2001). That is, the increased availability of personal vitality resources will lower employees’ need to gain other personal resources through leisure, and will result in employees allocating less time to leisure activities. In sum, we reason that occupational interactional requirements will influence how employees allocate their time at home, and that this allocation will enrich their life at home.

*Hypothesis 1. Occupational interactional requirements serve as supplements for enriching activities at home that are resource draining (i.e., occupational interactional requirements are positively related to time spent caring for family).*

*Hypothesis 2. Occupational interactional requirements serve as supplements for maintenance activities at home that are resource draining (i.e., occupational interactional requirements are positively related to time spent in housework).*

*Hypothesis 3. Occupational interactional requirements serve as substitutes for enriching activities at home that are resource replenishing (i.e., occupational interactional requirements are negatively related to time spent in leisure).*

**STUDY 1**

**Data**

The data used in this study are taken from two publicly available data sources: the *American Time Use Survey (ATUS)* and the *Occupational Information Network (O\*NET)*. The ATUS is an ongoing survey sponsored by the U.S. Bureau of Labor Statistics and conducted by the U.S. Census Bureau. Its main purpose is to measure how people divide their time among various life activities, such as paid work, sleeping, education, socializing, volunteering, and child and adult care, in order to provide key information for understanding individual and family well-being and to inform public policy (Bureau of Labor Statistics, 2016a; Hammermesh, Frazis, & Stewart, 2005; see also Bureau of Labor Statistics, 2016b, for a list of published studies using ATUS data). ATUS respondents are interviewed by trained interviewers using computer-assisted telephone interviewing, and, in order to minimize recall bias, are asked to report how they spent their time only on the day before the interview (Hammermesh et al., 2005; Horrigan & Herz, 2004). For each activity reported, the ATUS collects the start and stop times, which helps to ensure that a respondent’s answers are internally consistent (Hammermesh et al., 2005). Overall, the ATUS data collection process has multiple checks to ensure data accuracy (Horrigan & Herz, 2004).

**FIGURE 2**  
**Activities Performed at Home: Vitality Resources as Supplements and Substitutes**

Type of Resource Utilization	Activities at Home		Function of Vitality Resources
	Maintenance Activities	Enriching Activities	
Resource Draining	Housework	Caring for Family	Supplements
Resource Replenishing	Personal Care	Leisure	Substitutes



Because changes in time use patterns occur relatively slowly over time, it is possible to combine multiple years of ATUS data into a larger cross-sectional data set. As such, we used all available ATUS data from 2003 to 2015. As we detail below, we explicitly used the ATUS categories that assessed the amount of time people spent at work, in caring for family, in housework, and in leisure. Additionally, we also drew on ATUS data related to demographic variables such as sex, age, income, marital/partner status, and number of children.

We supplemented the ATUS data with information from the O\*NET database. The O\*NET program is sponsored by the U.S. Department of Labor, Employment and Training Administration and its objective is to collect information on an exhaustive set of occupation-specific characteristics. We used the final “Analyst” version (4.0) of the O\*NET database. Through the O\*NET, we obtained data on occupational interactional requirements as well as on physical and cognitive demands across occupations. We linked these O\*NET data to the ATUS data using the occupational codes included in the U.S. Census Bureau’s Occupation Classification System, which is based on the Standard Occupational Classification (see <https://www.bls.gov/tus/iocodes.htm>).

**Sample**

Based on the objectives of our study and the structure of the ATUS data, we adopted a number of sample selection criteria. First, because we are interested in the interplay between occupational interactional requirements and time allocation at

home, we restricted the sample to respondents who reported being employed on a full-time basis in their primary job. Second, in order to capture typical work activities and avoid the dominance of weekend activities, we focused the sample on respondents whose diary day fell on a weekday (and was not a holiday). Third, in order to make the analysis of home domain activities more relevant, we only included those respondents who reported living with a family member (e.g., spouse/partner, children, siblings, parents, and other relatives such as nephews/nieces, parents-in-law, etc.). This yielded an overall sample of 17,490 respondents. The average age of respondents was 41.04 years ( $SD = 11.68$ ), 41.76% of the respondents were female, 78.76% of them were married/partnered, and 51.34% of them had children at home (see Table 1).

**Measures**

**Occupational interactional requirements.** Grandey et al. (2013) outlined that expert-coded assessments of each occupation’s interactional requirements are an appropriate way to assess this construct. Thus, following Grandey, Kern, and Frone (2007) and Glomb and colleagues (Bhave & Glomb, 2016; Glomb et al., 2004), we measured occupational interactional requirements using eight items from the O\*NET. Sample items included “performing for or working directly with the public” and “contact with others.” Because these eight O\*NET items were drawn from two different content domains (the “Generalized Work Activities” domain, which includes items assessed on a seven-point scale, and the “Work

**TABLE 1**  
**Study 1: Descriptive Statistics and Bivariate Correlations**

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1 Sex	.42	.49											
2 Age	41.04	11.68	.00										
3 Marital/partner status	.79	.41	-.10	.29									
4 Children	.51	.50	-.04	-.23	.04								
5 Income	8.14	5.27	-.18	.23	.22	.03							
6 Time spent at work	537.00	94.11	-.16	.03	.06	.00	.19						
7 Time spent caring	23.31	49.58	.07	-.17	.06	.43	.03	-.11					
8 Time spent in housework	50.62	62.38	.20	.13	.08	-.02	-.05	-.20	-.01				
9 Time spent in leisure	146.76	101.12	-.12	.07	-.04	-.16	-.12	-.29	-.21	-.18			
10 Occupational physical demands	0	1	-.39	-.05	-.02	.03	-.17	.09	-.07	-.03	.07		
11 Occupational cognitive demands	0	1	.09	.11	.16	-.00	.48	.09	.07	-.01	-.12	-.50	
12 Occupational interactional requirements	0	1	.30	.04	.04	-.02	.20	.08	.07	.01	-.13	-.55	.57

Notes:  $n = 17,490$ . Correlations greater than .02 are significant at  $p < .05$  and correlations greater than .03 are significant at  $p < .01$ . Sex: 0 = male, 1 = female. Marital/partner status: 0 = not married and not living with a partner, 1 = married or living with a partner. Children: 0 = no children, 1 = one or more children. Income is in 100s of dollars and refers to weekly earnings. All time variables are in minutes.

Context” domain, which includes items assessed on a five-point scale), we first standardized the items, and then constructed the occupational interactional requirements measure (for details, see Glomb et al., 2004). The coefficient  $\alpha$  for this measure was .93.

**Enriching, resource-draining activities.** In accordance with Bianchi (2011) and Krueger (2007), caring for family represents an enriching activity that is resource draining. In the ATUS, the category of “Caring for and Helping Household Members” is composed of caring for and helping household children, activities related to household children’s education, activities related to household children’s health, caring for household adults, and helping household adults. Our sample of full-time respondents reported spending an average of 0.39 hours (i.e., about 23 minutes) a day in caring activities ( $SD = 0.83$  hours).

**Maintenance, resource-draining activities.** As observed in Bianchi (2011) and Krueger (2007), performing housework represents a maintenance activity that is resource draining. In the ATUS, the category of “Household Activities” includes, among others, housework, food preparation and cleanup, and household management. Our sample of full-time respondents reported spending an average of 0.84 hours (i.e., about 51 minutes) a day in household activities ( $SD = 1.04$  hours).

**Enriching, resource-replenishing activities.** In accordance with Bianchi (2011) and Krueger (2007), leisure represents an enriching activity that is resource replenishing. In the ATUS, the category of “Socializing, Relaxing, and Leisure” includes activities such as socializing and communicating, attending social, arts, and entertainment events, watching television, playing games, and reading for personal interest. Our sample of full-time respondents reported spending an average of 2.45 hours (i.e., about 147 minutes) a day in these activities ( $SD = 1.69$  hours).

**Control variables.** Even though our focus was on a sample of full-time employees, the actual time respondents spent at work might vary, and this could influence our focal dependent variables. As such, we used the ATUS category labeled “Work and Work-Related Activities” to measure time spent working as a control variable. Our sample of full-time respondents reported working an average of 8.95 hours a day ( $SD = 1.57$  hours). Furthermore, we included demographic, family-domain, and job-related control variables that could likely influence the relationship between occupational interactional

requirements and time allocation at home. Following conceptual (e.g., Wayne, Grzywacz, Carlson, & Kacmar, 2007), primary (e.g., Dahm, Glomb, Manchester, & Leroy, 2015), and meta-analytic studies (e.g., Byron, 2005) in work–family research, we included sex, age, marital/partner status, presence of children, and income (weekly earnings) as control variables, because such demographic and family-domain variables are indicative of the extent of access to social and financial support, and the availability of time at home (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). Following research on the effects of occupational influences on individual-level work characteristics (e.g., Dierdorff & Morgeson, 2013), we also included measures of occupational physical demands ( $\alpha = .96$ ) and occupational cognitive demands ( $\alpha = .98$ ; Glomb et al., 2004) as control variables, because such job-related variables can influence employees’ work attitudes and their subsequent time allocations at home (see Morgeson, Dierdorff, & Hmurovic, 2010). Finally, because the ATUS data were collected across different days, we included dummy variables for each day of the week (Kimmel & Connelly, 2007) to account for the fact that employees’ moods and behaviors could vary across different days of the week (Egloff, Tausch, Kohlmann, & Krohne, 1995).

## Analysis

In our data, multiple respondents within an occupation would have the same level of occupational interactional requirements. In estimating the models, this may affect tests of statistical significance and bias standard errors (Wooldridge, 2002). To address this concern, we employed the “cluster” procedure in STATA 14 (StataCorp, 2015). This procedure estimates a variance–covariance matrix in which the error terms are interdependent within occupations and independent across occupations (Rogers, 1993). Furthermore, because each employee is embedded in a 24-hour cycle, the dependent variables of time spent caring for family, time spent in housework activities, and time spent in leisure activities are interrelated. To account for these interdependencies, we estimated our models simultaneously (Wooldridge, 2002). Finally, to ensure that our results are representative of the target population of interest (i.e., the population associated with the selection criteria discussed above), we included sampling weights in all analyses. The Bureau of Labor Statistics created these sampling weights to account for characteristics of the sampling and data collection procedures, and strongly

recommends their inclusion in the estimation process (Bureau of Labor Statistics, 2016a).

**Results and Discussion**

Table 1 (above) presents the descriptive statistics and the correlations. Table 2 provides results of the simultaneously estimated models. We first estimated models for the three dependent variables of time spent caring for family, time spent in housework activities, and time spent in leisure activities that only included control variables (Table 2, Models 1, 3, and 5). Next, we estimated models for the same three dependent variables that also included the focal variable of occupational interactional requirements (Table 2, Models 2, 4, and 6).

In Hypothesis 1, we proposed that occupational interactional requirements serve as supplements for enriching activities that are resource draining such that they are positively related to time spent caring for family. Results indicated that occupational interactional requirements were positively related to time spent caring for family ( $b = 1.73, p < .01$ ), thus providing support for Hypothesis 1 (Table 2, Model 2). In Hypothesis 2, we proposed that occupational interactional requirements serve as supplements for maintenance activities that are resource draining such that they are positively related to time spent in housework activities. Results indicated that this relationship was not statistically significant ( $b = -.68, p > .05$ ), and Hypothesis 2 was not supported (Table 2, Model 4). In Hypothesis 3, we proposed that occupational interactional requirements serve as substitutes for enriching activities that are resource replenishing such that they are negatively related to time spent in

leisure activities. Results indicated that occupational interactional requirements were negatively related to time spent in leisure ( $b = -3.48, p < .01$ ), thus providing support for Hypothesis 3 (Table 2, Model 6).

To more fully illustrate these empirical results, it would be helpful to identify effect sizes. This can be done in two ways: directly, based on the regression coefficients, and indirectly, based on the full spectrum of occupational interactional requirements. For the first approach, we followed the guidelines of time use researchers and focused on weekly effects (e.g., Aguiar & Hurst, 2007; Bianchi, 2011). Specifically, we identified effects for the workweek (i.e., by multiplying the relevant regression coefficients by five). The results indicate that a 1 standard deviation increase in occupational interactional requirements is associated with about nine minutes more of caring activities each workweek. Furthermore, a 1 standard deviation increase in occupational interactional requirements is associated with approximately 17 minutes less of leisure activities each workweek.

To better understand the practical significance of these findings, we can use the range of occupational interactional requirements as an additional approach. The range helps in understanding the difference in interactional requirements between occupations with high interactional requirements (e.g., salespeople) and occupations with low interactional requirements (e.g., data entry operators). Our results show that, for the range of occupational interactional requirements, time spent in caring activities increases by about 37 minutes per workweek. That is, all else being equal, employees in occupations with high interactional requirements spend 37 minutes more each workweek in caring for their

**TABLE 2**  
**Study 1: Results for Time Spent Caring, in Housework, and in Leisure**

	Time Spent Caring		Time Spent in Housework		Time Spent in Leisure	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Sex	7.28**	6.74**	25.30**	25.51**	-39.50**	-38.43**
Age	-.45**	-.44**	.64**	.63**	.70**	.70**
Marital/partner status	8.22**	8.26**	12.38**	12.37**	-8.60**	-8.68**
Children	40.58**	40.58**	1.24	1.24	-28.64**	-28.65**
Income	.29**	.31**	-.14	-.14	-1.74**	-1.76**
Time spent at work	-.06**	-.06**	-.12**	-.12**	-.32**	-.31**
Occupational physical demands	-.86	-.35	4.25**	4.06**	-.70	-1.71
Occupational cognitive demands	2.78**	2.03**	-.08	.21	-3.42**	-1.93
Occupational interactional requirements		1.73**		-.68		-3.48**

Notes:  $n = 17,490$ . Number of occupational clusters = 439. Models 1, 3, and 5 were estimated simultaneously. Models 2, 4, and 6 were estimated simultaneously. All models included controls for day of the week.  
\*\*  $p < .01$  (two-tailed)

household members compared to employees in occupations with low interactional requirements. Furthermore, for the range of occupational interactional requirements, time spent in leisure activities decreases by about 75 minutes per workweek. That is, all else being equal, employees in occupations with high interactional requirements spend 75 minutes less each workweek in leisure activities compared to employees in occupations with low interactional requirements. In other words, these results suggest that, compared to employees working in occupations with low interactional requirements, employees working in occupations with high interactional requirements could spend over half an hour more each workweek helping their children with their homework, and over one hour less each workweek watching television to unwind. Given that the average time that people in our sample spend in caring activities each workweek is approximately 117 minutes, the additional 37 minutes represent a sizable amount of time (almost a third of the average time). Overall, these findings are supportive of our theoretical framework, and the pattern of results suggests that occupational interactional requirements function as both substitutes and supplements. Put simply, occupational interactional requirements facilitate a *reallocation of time* from resource-replenishing activities (i.e., leisure) to resource-draining activities (i.e., caring for family).

There are some limitations to our first study, which prompt our next line of inquiry. First, our data are cross-sectional panels covering a 13-year time horizon. These data, however, are not longitudinal, and we cannot clearly delineate unfolding processes. Second, the measure of occupational interactional requirements, although consistent with our conceptualization and prior operationalizations (e.g., Glomb et al., 2004; Grandey et al., 2007), is derived by occupational analysts. Yet, individual employees might report differing levels of occupational interactional requirements, and could also experience different types of interactions throughout the course of the workday (Grandey et al., 2013; Wharton, 2009). For instance, during the course of the workday, a customer service representative may experience potentially depleting interactions with difficult and angry customers, but could also experience potentially replenishing interactions with customers who are thrilled with the resolutions to their problems. As such, accounting for the potentially differing effects associated with positive and negative workplace interactions will facilitate a clearer understanding of the overall influence of

occupational interactional requirements on work-home enrichment.

Third, we previously theorized that occupational interactional requirements spark employees' vitality resources (Halbesleben et al., 2014; Ryan & Deci, 2008), which they carry over and utilize at home. Although our results are suggestive of this process, explicitly assessing this mechanism will help to more clearly test the theoretical framework. In so doing, it is also essential to account for employees' trait levels of vitality to mitigate concerns related to self-selection (i.e., it is possible that people who are high on trait vitality might choose occupations with high interactional requirements because they prefer social interactions, and, as such, report higher levels of state vitality not as result of their workplace interactions but on account of their higher levels of trait vitality; see Ryan & Frederick, 1997). Thus, accounting for employees' trait vitality will provide a more robust test of the effect of occupational interactional requirements on work-home enrichment.

Finally, in addition to the methodological reasons noted above, there is also a conceptual imperative for Study 2. In Study 1, we considered the outcome variables of time spent in different activities at home as objective indicators of work-home enrichment (Edwards & Rothbard, 2000; Greenhaus & Powell, 2006; ten Brummelhuis & Bakker, 2012). Explicitly assessing whether employees *perceive* work-home enrichment on account of occupational interactional requirements will provide converging evidence, and will also help to assess the affective path to work-home enrichment (Greenhaus & Powell, 2006), thereby facilitating a constructive replication (Lykken, 1968). In light of these arguments, we propose:

*Hypothesis 4. Employees' vitality mediates the relationship between occupational interactional requirements and work-home enrichment.*

## STUDY 2

### Participants and Procedure

We sent surveys to the formal email addresses of 338 full-time employees in Singapore who were living with a family member. Undergraduate students at a university in Singapore provided the contact information of these employees (see Greguras & Diefendorff, 2010, and Harrison & Wagner, 2016, for a similar procedure). To ensure data accuracy, we requested the students to provide information on the participants' organizational affiliation and their formal email addresses (e.g., organization name.com).

Three hundred and twenty-four participants (95.86%) responded to an introductory survey through which we collected information on trait vitality and employee demographics. One week later, we sent participants an *end-of-the-workday survey* (Time 1), and, the following morning, a *beginning-of-the-workday survey* (Time 2). We received complete responses from 274 participants across these two workday surveys. The average age of the respondents in our sample of full-time employees was 41.52 years ( $SD = 13.61$ ), 58.03% of them were women, 59.12% of them were married/partnered, and 59.12% of them had children.

## Measures

**Occupational interactional requirements.** We assessed occupational interactional requirements in the end-of-the-workday survey (Time 1) using the same measure as in Study 1. Participants reported the extent to which they needed to interact throughout their workday on a five-point scale (1 = *not at all*, 5 = *nearly all the time*). The coefficient  $\alpha$  for this measure was .86.

**State vitality.** We used Ryan and Frederick's (1997) six-item scale to assess state vitality in the end-of-the-workday survey (Time 1). Participants indicated the extent to which they felt energized at the time they completed the survey (e.g., "At this moment, I feel alive and vital") on a seven-point scale (1 = *not at all true*, 7 = *very true*). The coefficient  $\alpha$  for this measure was .93.

**Work-home enrichment.** We used Carlson, Kacmar, Wayne, and Grzywacz's (2006) nine-item scale to assess work-home enrichment in the beginning-of-the-workday survey (Time 2). As an example, participants reported whether their involvement in their work the previous day "put me in a good mood and this helped me be a better family member" on a five-point scale (1 = *strongly disagree*, 5 = *strongly agree*). The coefficient  $\alpha$  for this measure was .96.

**Control variables.** First, as discussed earlier, in order to minimize concerns related to self-selection, we included trait vitality as a control variable. We assessed this variable in the introductory survey using the trait version of Ryan and Frederick's (1997) measure of vitality. Participants reported the extent to which they felt vital and energized *in general* on a seven-point scale (1 = *not at all true*, 7 = *very true*). The coefficient  $\alpha$  for the six-item measure was .91. Second, employees could experience both positive and negative interactions during the course of their workday, which could also influence their vitality.

For this reason, we included two additional control variables, which were assessed on a five-point scale (1 = *very slightly or not at all*, 5 = *extremely*) in the end-of-the-workday survey (Time 1): positive interactions (e.g., pleasant interactions;  $\alpha = .82$ ) and negative interactions (e.g., stressful interactions;  $\alpha = .80$ ) (Dimotakis, Scott, & Koopman, 2011). Finally, to facilitate comparability with Study 1, we included a similar set of demographic controls (see Table 3).

## Results and Discussion

We tested Hypothesis 4 based on the path-analytic procedures outlined by Hayes (2013) using Mplus 6.0 (Muthén & Muthén, 2010). Specifically, we tested the mediating effect of state vitality for the relationship between occupational interactional requirements and work-home enrichment by deriving the indirect effect and constructing its bootstrapped confidence interval (CI). Results indicated that the indirect effect of occupational interactional requirements on work-home enrichment via state vitality was statistically significant ( $ab = .04$ ; 95% CI [0.01, 0.08]), thus providing support for Hypothesis 4 (see Table 4).

To parallel the hypothesis tests from Study 1, we also examined the total effect of occupational interactional requirements on work-home enrichment. The total effect is the sum of the indirect effect (discussed above) and the direct effect of occupational interactional requirements on work-home enrichment ( $c' = .12$ ; 95% CI [0.01, 0.25]; see Table 4). The total effect was positive and statistically significant ( $ab + c' = .16$ ; 95% CI [0.04, 0.29]), and indicated that a 1 standard deviation increase in occupational interactional requirements was associated with a 0.16 standard deviation increase in work-home enrichment. Notably, in estimating all these effects, we also accounted for the effects associated with trait vitality, and those associated with positive and negative interactions that could occur throughout the course of the workday.<sup>4</sup>

<sup>4</sup> A potential alternate explanation for our findings is that people high in extraversion or trait positive affect might self-select into occupations that have greater interactional requirements, which could then result in a spurious relationship between occupational interactional requirements and work-home enrichment. To account for this possibility, we estimated models that included extraversion and trait positive affect as additional control variables. Doing so did not change the pattern of results.

**TABLE 3**  
**Study 2: Descriptive Statistics and Bivariate Correlations**

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Sex	.58	.49	—									
2 Age	41.52	13.61	-.29	—								
3 Marital/partner status	.59	.49	-.26	.76	—							
4 Children	.59	.49	-.23	.86	.83	—						
5 Positive interactions	3.54	.60	-.09	.02	.06	.00	<b>.82</b>					
6 Negative interactions	1.84	.71	-.02	-.09	-.10	-.05	-.22	<b>.80</b>				
7 Trait vitality	4.65	1.08	-.11	.15	.12	.13	.37	-.14	<b>.91</b>			
8 Occupational interactional requirements	2.74	.75	-.02	-.08	-.11	-.12	.22	.24	.16	<b>.86</b>		
9 State vitality	4.07	1.19	-.16	.21	.18	.17	.46	-.21	.57	.24	<b>.93</b>	
10 Work-home enrichment	3.29	.66	-.12	.18	.22	.18	.32	-.14	.42	.20	.45	<b>.96</b>

Notes:  $n = 274$ . Correlations greater than .12 are significant at  $p < .05$  and correlations greater than .16 are significant at  $p < .01$ . Reliabilities are on the diagonal in bold. Sex: 0 = male, 1 = female. Marital/partner status: 0 = not married and not living with a partner, 1 = married or living with a partner. Children: 0 = no children, 1 = one or more children.

Finally, based on the recommendations of Wen and Fan (2015), the ratio of the indirect effect to the total effect provides a meaningful index of mediation effect size. This ratio was 0.22, indicating that almost a quarter of the total effect of occupational interactional requirements on work-home enrichment was accounted for by the indirect effect of occupational interactional requirements on work-home enrichment via the mediator of state vitality. Overall, these results provide converging evidence that occupational interactional requirements spark vitality resources that are gainfully invested to enrich employees' lives at home.

In both Study 1 and Study 2, we utilized a single day's data to test our hypotheses. In Study 1, our decision to do so was guided by the observation that time-diary estimates for a single day provide meaningful information (Hammermesh et al., 2005). To complement Study 1, in Study 2, we assessed focal constructs at the requisite times during employees' workday. Nevertheless, interactional requirements, state vitality, and work-home enrichment can fluctuate across multiple workdays—such potential within-person variability in focal variables is meaningful, and could help inform dynamic processes across work and home domains (Dalal, Bhave, & Fiset, 2014; Ilies et al., 2007).<sup>5</sup> To examine this possibility of dynamic work-home relationships, and also assess the robustness of Study 2's findings, we collected data over two weeks using an experience sampling

methodology. Through these data, we tested whether, at the within-person level, state vitality mediates the relationship between occupational interactional requirements and work-home enrichment. That is, we assessed whether work-home enrichment for a focal employee is higher (lower) on days when occupational interactional requirements, and consequently state vitality, are higher (lower) than average for that employee (e.g., Butts, Becker, & Boswell, 2015; Scott, Garza, Conlon, & Kim, 2014).

### STUDY 3

#### Participants and Procedures

We recruited U.S.-based participants on Amazon's Mechanical Turk platform. To align with the sample characteristics of Studies 1 and 2, we conducted a pre-survey to identify a set of participants who worked full-time and lived with a family member. We invited 130 respondents who met our sample selection criteria to participate in an introductory survey through which we assessed demographic and personality characteristics. One week later, we began the experience-sampling phase of the study where we assessed our focal study variables at the same time points as in Study 2. Participants received surveys at two time points each day—toward the end of their workday and at the beginning of their workday—for two consecutive workweeks (i.e., 10 days).

One hundred and seventeen eligible participants began the experience-sampling phase of the study. Because experience sampling data collection is intensive (Beal & Weiss, 2003), it yielded usable data from 79 participants. To ensure validity of the data, we excluded participants who did not work on a particular

<sup>5</sup> We thank the editor and the reviewers for this suggestion, and for ideas related to the supplementary analyses below.

**TABLE 4**  
**Study 2: Path-Analytic Regression Results for Work–Home Enrichment**

	State Vitality	Work–Home Enrichment	
<i>Main Effects</i>			
Sex	-.11		-.03
Age	.01		-.00
Marital/partner status	.04		.31
Children	-.02		.06
Positive interactions	.23**		.09
Negative interactions	-.13*		-.06
Trait vitality	.42**		.22**
Occupational interactional requirements	.17**		.12*
State vitality			.21**
<i>Indirect Effects</i>			
	<i>Estimate</i>	<i>LLCI</i>	<i>ULCI</i>
Occupational interactional requirements → Work–home enrichment (via State vitality)	.04	.01	.08

Notes:  $n = 274$ . LLCI = lower level of the 95% bootstrapped confidence interval. ULCI = upper level of the 95% bootstrapped confidence interval.

\*  $p < .05$

\*\*  $p < .01$  (two-tailed)

day, completed the surveys at incorrect times based on timestamps (e.g., Scott & Barnes, 2011), failed attention checks (Oppenheimer, Meyvis, & Davidenko, 2009), or provided data for less than half the days (i.e., five days) of the study (e.g., Judge, Scott, & Ilies, 2006). Participants in our final sample completed 1,220 surveys (i.e., 610 matched end- and beginning-of-workday surveys) out of a maximum possible of 1,580, a response rate of 76.6% across participants and time periods. The average age of the respondents in our sample of full-time employees was 35.75 years ( $SD = 7.33$ ), 48.69% of them were female, 72.62% of them were married/partnered, and 68.20% of them had children.

## Measures

We assessed occupational interactional requirements ( $\alpha = .86$ ), state vitality ( $\alpha = .94$ ), and work–home enrichment ( $\alpha = .95$ ) using the same measures as in Study 2. For positive ( $\alpha = .85$ ) and negative ( $\alpha = .80$ ) interactions, we used two-item versions of the measures from Study 2 (see Table 5 for the descriptive statistics). The coefficient  $\alpha$  values reported above are averaged across days.

## Analysis

Because our data possessed a hierarchical structure—daily observations nested within employees—we

employed multilevel modeling (Raudenbush & Bryk, 2002). Following the recommendations in the literature, we centered all level 1 predictors at the individuals' means (i.e., group-mean centering), and included a linear time trend and controls for day of the week (Bolger & Laurenceau, 2013; Hofman, Griffin, & Gavin, 2000). Centering at each individual's mean removes all between-person variance, which implicitly controls for individual characteristics such as trait vitality, extraversion, trait positive affect, and demographics (Scott et al., 2014). To assess the mediating effect of state vitality, we conducted a multilevel path analysis and bootstrapped the indirect effect (Hayes, 2013) using STATA 14 (StataCorp, 2015).

## Results

First, results based on null models indicated that 29.1% and 31.6% of the variance in state vitality and work–home enrichment, respectively, existed at the within-person level. Second, within-person path-analytic analyses indicated that the indirect effect of occupational interactional requirements on work–home enrichment via state vitality was positive and statistically significant ( $ab = .03$ ; 95% CI [0.01, 0.07]; see Table 6). The magnitude of the indirect effect was similar to the one that we observed in Study 2. Overall, these results illustrate the dynamic interplay of workplace interactions and work–home enrichment,

**TABLE 5**  
**Study 3: Descriptive Statistics and Bivariate Correlations**

		Mean	SD	1	2	3	4
1	Positive interactions	3.79	.82				
2	Negative interactions	1.61	.73	-.25			
3	Occupational interactional requirements	2.45	.79	.13	.25		
4	State vitality	4.28	1.40	.30	-.17	.09	
5	Work-home enrichment	3.31	.92	.20	-.17	-.05	.25

Notes: Number of matched observations = 610. Number of participants = 79. Correlations represent group-mean centered relationships at the within-person level of analysis. Correlations greater than .08 are significant at  $p < .05$  and correlations greater than .12 are significant at  $p < .01$ .

and provide additional support for the mediating effect of state vitality.

### SUPPLEMENTARY ANALYSES

Although Studies 1, 2, and 3 provide converging evidence regarding the effect of occupational interactional requirements on work-home enrichment, there are potential alternative explanations for our findings. In this section, we address these concerns through additional data and analyses.

In our theoretical framework, we identified occupational interactional requirements as desirable properties of jobs. However, as we previously discussed, there is evidence that engaging in workplace interactions could be associated with lower employee well-being (e.g., Hochschild, 1983; Lively, 2000). Furthermore, we identified caring for family as an enriching activity that is resource draining, housework as a maintenance activity that is resource

draining, and leisure as an enriching activity that is resource replenishing. Although the findings of Study 1 are supportive of this conceptualization, we have not explicitly assessed employees' well-being when they engage in these different activities in the home domain. Finally, we theorized and observed the resource-replenishing potential of interactional requirements at work; yet, caring for family also involves interactions, albeit in the home domain, which could also play a generative role (Bianchi, 2011; Crouter, Head, McHale, & Tucker, 2004). Thus, it will be helpful to understand whether employees' subjective well-being differs when they engage in interactions at work compared to when they engage in interactions at home. To address these questions, we utilize data from the ATUS Well-Being Module (see <https://www.bls.gov/tus/wbdatafiles.htm>).

Data for the ATUS Well-Being Module were collected in 2010, 2012, and 2013 through a series of questions that were added at the end of the regular

**TABLE 6**  
**Study 3: Within-Individual Path-Analytic Regression Results for Work-Home Enrichment**

	State Vitality	Work-Home Enrichment	
<i>Main Effects</i>			
Positive interactions	.36**		.11*
Negative interactions	-.19*		-.08
Occupational interactional requirements	.24*		-.06
State vitality			.13**
<i>Indirect Effects</i>			
	<i>Estimate</i>	<i>LLCI</i>	<i>ULCI</i>
Occupational interactional requirements → Work-home enrichment (via State vitality)	.03	.01	.07

Notes: Number of matched observations = 610. Number of participants = 79. The results are level 1 estimates from a multilevel path-analytic model with random coefficients in which all level 1 predictors were centered at individuals' means. The model included a linear time trend and controls for day of the week. LLCI = lower level of the 95% bootstrapped confidence interval. ULCI = upper level of the 95% bootstrapped confidence interval.

\*  $p < .05$

\*\*  $p < .01$  (two-tailed)

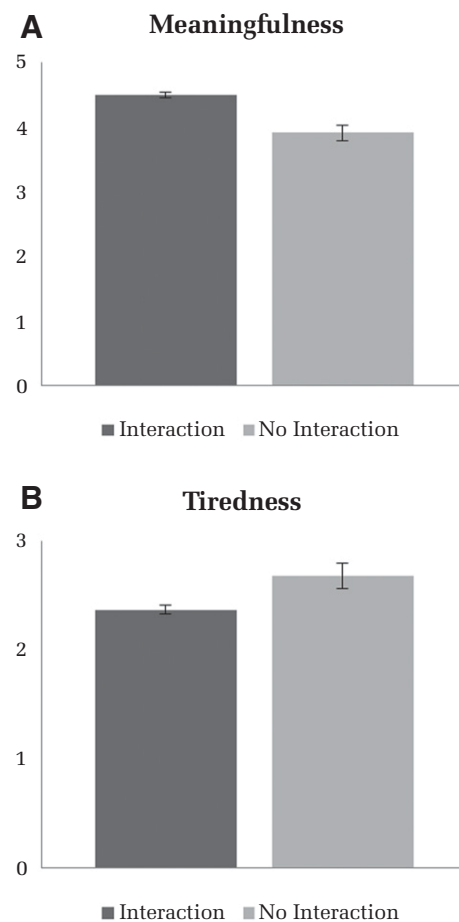


ATUS interview. ATUS respondents were asked to report their subjective well-being when they were performing a particular activity using the following items: meaningful, stressed, happy, tired, pain, and sad (0 = *did not experience the feeling at all*; 6 = *the feeling was very strong*). In addition, they were asked to report whether they were interacting with anyone while carrying out the activity (yes/no). As per the design of the Well-Being Module, ATUS respondents provided ratings for three activities, which were randomly chosen from their diary day. As such, for the subsample of ATUS respondents included in Study 1 who also participated in the Well-Being Module, there were 1,857 spells of work activities, 852 spells of family caring activities, 1,244 spells of housework activities, and 1,320 spells of leisure activities. Using these data, we set out to address three specific questions: (1) Does employees' subjective well-being differ when they are engaged in interactions at work compared to when they are not engaged in interactions at work?, (2) Does employees' subjective well-being differ when they are engaged in interactions at work compared to when they are engaged in interactions at home while caring for their family?, and (3) Are there differences in subjective well-being when employees are caring for their family, performing housework, or engaged in leisure?

To address the first two questions, we chose two indicators of subjective well-being that are associated with the focal construct of vitality: tired and meaningful. The item "tired" reflects the absence of energy, which is the opposite of vitality, and the item "meaningful" draws on the reasoning that employees' engagement in occupational interactional requirements is meaningful, and thus associated with vitality (see Ryan & Deci, 2008). For the first question—comparing employees' well-being when they were interacting at work to when they were not interacting at work—results revealed that employees reported higher levels of meaningfulness when they were interacting at work ( $M = 4.49$ ,  $SD = 1.51$ ) compared to when they were not interacting at work ( $M = 3.91$ ,  $SD = 1.96$ ) ( $t = 5.45$ ,  $p < .01$ ).<sup>6</sup> In contrast, employees reported lower levels of tiredness when they were interacting at work ( $M = 2.37$ ,  $SD = 1.77$ ) compared to when they were not interacting at work ( $M = 2.68$ ,  $SD = 1.93$ ) ( $t = -2.56$ ,  $p < .05$ ). These findings are consistent with our reasoning that occupational interactional requirements

<sup>6</sup> Based on the Bureau of Labor Statistics' recommendations, we included ATUS Well-Being activity weights in these analyses (Bureau of Labor Statistics, 2016a).

**FIGURES 3a and 3b**  
Comparison of Subjective Well-Being When Interacting at Work and Not Interacting at Work

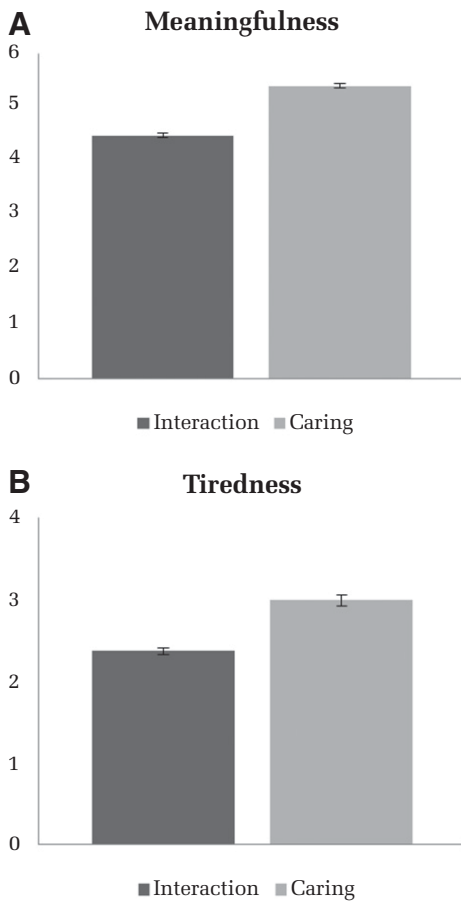


Notes: Error bars indicate standard error of the mean.

represent replenishing interactions that can spark employees' vitality (see Figures 3a and 3b).

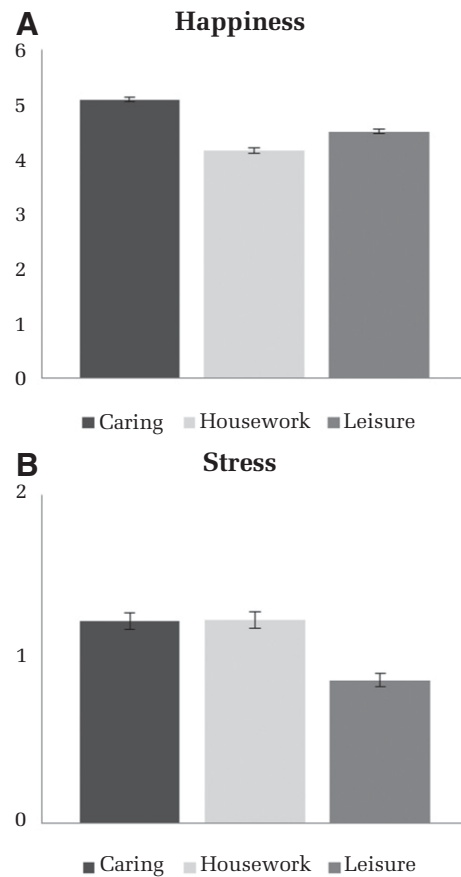
For the second question—comparing employees' well-being when they were interacting at work to when they were interacting at home while caring for their family—results revealed that employees reported higher levels of meaningfulness at home while caring for their family ( $M = 5.40$ ,  $SD = 1.23$ ) compared to when they were interacting at work ( $M = 4.49$ ,  $SD = 1.51$ ) ( $t = 7.13$ ,  $p < .01$ ). However, employees also reported higher levels of tiredness at home while caring for their family ( $M = 2.99$ ,  $SD = 2.05$ ) compared to when they were interacting at work ( $M = 2.37$ ,  $SD = 1.77$ ) ( $t = 4.10$ ,  $p < .01$ ; see Figures 4a and 4b). The finding that caring for family members can be tiring is consistent with observations in recovery research, which considers it to be

**FIGURES 4a and 4b**  
**Comparison of Subjective Well-Being When Interacting at Work and Caring for Family at Home**



Notes: Error bars indicate standard error of the mean.

**FIGURES 5a and 5b**  
**Comparison of Subjective Well-Being When Caring for Family, Performing Housework, and Engaging in Leisure**



Notes: Error bars indicate standard error of the mean.

a “heavy duty” activity that is essential and has limited potential for resource recovery (Sonnentag, 2001; Sonnentag & Zijlstra, 2006).

To address the third question—comparing employees’ well-being when they were caring for their family, performing housework, or engaged in leisure—we chose two indicators of subjective well-being that reflect different dimensions of enrichment: happy and stressed. Happiness is a direct indicator of enrichment, whereas stress reflects the opposite of enrichment (Diener, 2000); higher happiness and lower stress are important indicators of quality of life at home and reflect the notion of work-home enrichment (Greenhaus & Powell, 2006). Results revealed that, when employees were engaged in caring for their family, they reported higher levels of happiness ( $M = 5.09, SD = 1.30$ ) compared to when they were engaged in leisure activities ( $M = 4.50,$

$SD = 1.50$ ) ( $t = 6.69, p < .01$ ); furthermore, the levels of happiness reported when employees were engaged in leisure activities ( $M = 4.50, SD = 1.50$ ) were significantly higher than the levels of happiness reported when they were engaged in housework ( $M = 4.15, SD = 1.67$ ) ( $t = 4.89, p < .01$ ). In contrast, when employees were engaged in leisure activities, they reported lower levels of stress ( $M = 0.87, SD = 1.41$ ) compared to when they were engaged in caring for family ( $M = 1.23, SD = 1.52$ ) or in housework ( $M = 1.24, SD = 1.68$ ) ( $t = -4.23, p < .01$ , and  $t = -5.31, p < .01$ , respectively); there was no statistically significant difference in the reported levels of stress when employees were engaged in caring for family and when they were engaged in housework ( $t = -.08, p > .05$ ; see Figures 5a and 5b). These findings about employees’ subjective well-being when they are

engaged in different activities at home provide empirical support for our resource framework that distinguishes between enriching and maintenance activities (caring for family, leisure vs. housework), and between resource-replenishing and resource-draining activities (leisure vs. caring for family, housework).

## GENERAL DISCUSSION

### Occupational Interactional Requirements and Work–Home Enrichment

We identify a theoretical link between occupational interactional requirements and work–home enrichment by developing a resource-based framework that integrates COR theory and SDT, and brings together the EL and work–family literatures. Our empirical results align with our theorizing that occupational interactional requirements serve as contextual social resources that can generate personal vitality resources, which enrich the quality of employees' lives at home. This work–home enrichment is reflected both in terms of objective indicators of employees' time allocation at home and in terms of employees' perceptual reflections of their work–home enrichment.

Specifically, our results suggest that vitality resources from work, arising on account of occupational interactional requirements, can be gainfully leveraged in the home domain by functioning as supplements for high-effort activities, such as caring for family, and substitutes for low-effort activities such as leisure. Because time within a day is limited—all employees are embedded in a 24-hour cycle—our results also suggest that occupational interactional requirements facilitate a reallocation of time at home from low-effort, resource-replenishing activities (i.e., leisure) to high-effort, resource-draining activities (i.e., caring for family). Furthermore, results of Study 2 and Study 3 clarify that vitality resources serve as an underlying linking mechanism that carries the effect of occupational interactional requirements to enrich employees' lives at home. In these studies, we focused on the day level to identify how daily interactions can trigger daily vitality, and subsequent enrichment in employees' home lives. To clarify this unfolding process, we measured the constructs at focal times during employees' workdays. In so doing, we also considered the effects of trait vitality and the prevalence of within-occupation and within-person variability in interactional requirements. Finally, through a set of supplementary analyses, we observed the

subjective well-being of employees across work and home domains.

Collectively, these findings open up a renewed consideration of work characteristics that have intrinsic resource-replenishing potential (Grant, 2007; Lilius, 2012). Occupational interactional requirements represent the interactive aspects of employees' jobs, and highlight the resource value of workplace interactions. Our findings align with perspectives from the work design literature as well as the field of positive psychology, which seek to identify how work can add meaningfulness in employees' lives and facilitate flourishing (Grant, 2008; Ryan & Deci, 2001). As a result, work itself—particularly interactive work—can be reenvisioned as an occasion of resource restoration. This dovetails with burgeoning research on breaks at work that aid in resource restoration (Troughakos, Hideg, Cheng, & Beal, 2014), and builds on the substantial body of work that highlights the benefits of recovery activities at home (Sonnentag, 2001, 2003). Our findings also advance work–family research by integrating occupational attributes that contribute to enrichment at home, thereby moving the discussion beyond variables such as income, job scope, flexible work arrangements, and job attitudes, which have been previously considered (see Greenhaus & Powell, 2006).

### Vitality Resources as Supplements and Substitutes

In integrating ten Brummelhuis and Bakker's (2012) work–home resources model with time allocation models from economics (Kimmel & Connelly, 2007), we developed a typology of resource utilization at home in terms of time allocation. Our framework identifies that resources from work can be utilized in two ways at home: as substitutes or as supplements. For activities that are resource draining but enriching to employees' lives, such as caring for their family members, vitality resources serve as supplements. However, for activities that are resource replenishing and enriching to employees' lives, such as leisure, vitality resources serve as substitutes.

As previously discussed, by calculating weekly effects across the full spectrum of occupational interactional requirements, we observed that, all else being equal, employees in occupations with high interactional requirements spend 37 minutes more each workweek in caring for family, and 75 minutes less each workweek in leisure activities, compared to those working in occupations with low interactional

requirements. The pattern of these results suggests that, in the home domain, the substitution effect of vitality resources is stronger than the supplementation effect; in terms of minutes, the substitution effect is two times larger than the supplementation effect. A potential explanation for this finding could be the fact that leisure activities (in which vitality resources serve as substitutes) are more discretionary than caring activities (Sonnetag, 2001; ten Brummelhuis & Trougakos, 2014).

Furthermore, the pattern of these effects illustrates that occupational interactional requirements serve a dual role through which they facilitate a reallocation of time in the home domain from resource-replenishing activities to resource-draining activities, and represent important gains for employees' health and family life. Consider, for instance, the effect of employed parents' time in leisure activities, such as watching television with their children, on their children's well-being. Estimates suggest that the amount of television that children watch in *one day* is similar to the amount of reading they do (or they are read to) in *a week* (Juster, Ono, & Stafford, 2004). Yet, medical research has reported that watching television in childhood is linked to adverse health consequences (e.g., obesity, higher cholesterol, etc.) as an adult (Hancox, Milne, & Poulton, 2004). Conversely, the U.S. Department of Education has reported the tremendous benefits of reading to children for even 30 minutes a week (Hughes, 1999).

Based on our results, *all else being equal*, employees working in occupations with high interactional requirements have the potential to spend more time reading to their children, and less time watching television. For these employees' children, from infancy until just 5 years of age, this could yield approximately 160 hours (37 minutes  $\times$  52 weeks  $\times$  5 years) of additional "literacy nutrition" prior to entering kindergarten, compared to children who have not benefited from this parental activity and have effectively missed this opportunity for "mental nourishment" (Hughes, 1999: 24). This possible reallocation of time from watching television to reading to children could then also be reflected in scores on standardized achievement tests—reading for one hour each week is associated with a half-point increase on test scores, whereas each hour of watching television is associated with a decrease of one-tenth of a point in test scores (see Hughes, 1999). This example illustrates the practical significance of our findings of how occupational interactional requirements could enrich employees' home lives.

The links between the type of resource utilization (draining or replenishing) and the nature of activities at home (maintenance or enriching) can also aid in clarifying the effects associated with other variables in our analysis (in Study 1), and in presenting a more complete picture of time allocation at home. In this vein, the time estimates for demographic and family domain variables provide a fuller context for understanding the effects associated with occupational interactional requirements. In terms of time spent on *housework*, on average, female employees allocate about 128 minutes more each workweek to household activities compared to male employees—a finding consistent with time use research (see Bianchi, 2011). Married/partnered employees also spend more time in housework; about 62 minutes more each workweek compared to single employees. Finally, employees in occupations with high physical demands spend about 96 minutes more each workweek in housework compared to employees in occupations with low physical demands, which is indicative of the "double burden" phenomenon (i.e., engaging in physical work both at work and at home; Moen, 1989).

In terms of time spent *caring for family*, on average, female employees allocate about 34 minutes more each workweek to caring activities compared to male employees. Married/partnered employees and employees with children also spend more time caring for family members—about 41 minutes and 203 minutes more each workweek, respectively—compared to single employees and employees with no children.

In terms of time spent in *leisure*, on average, female employees allocate about 192 minutes less to leisure activities each workweek compared to male employees. Married/partnered employees and employees with children also spend less time in leisure—about 43 minutes and 143 minutes less each workweek, respectively—compared to single employees and employees with no children. Finally, results indicate that the effect of occupational cognitive demands on time spent in leisure decreases in magnitude (and becomes statistically non-significant) after accounting for the effect of occupational interactional requirements. This reinforces the salience of occupational interactional requirements as a key antecedent to time allocation at home.

Collectively, these findings are indicative of additional time reallocation processes, particularly for women, married/partnered employees, and employees with children. Of note, the lesser amount of time that female employees are allocating to leisure

(i.e., 192 minutes per workweek) is almost entirely accounted for by the additional time that they devote to housework and caring activities (i.e., 162 minutes per workweek). These results suggest that employed women, even when working on a full-time basis, face more time constraints than their male counterparts. Our findings are also congruent with observations that, even though fathers' time involvement in childcare has increased over the years, mothers still spend a greater amount of time in these activities (Bianchi, 2011; Wang & Bianchi, 2009). Thus, the time allocation effects associated with occupational interactional requirements are noteworthy because they occur above and beyond the time allocation effects associated with the demographic and family domain variables that we account for in our models.

Overall, our empirical results exemplify how resource transfers from work to home could occur, and help to illuminate employees' time allocation patterns at home. These findings—embedded in the integration of theoretical perspectives from organizational scholarship (i.e., COR theory and SDT) and economics research on time use—spur a theoretical advance for work–family research, and also offer connections to other research streams such as leisure studies (e.g., Craig & Mullan, 2012) and distributed work (e.g., Rockmann & Pratt, 2015).

### Limitations and Future Directions

Notwithstanding these contributions, there are several limitations of our studies that offer opportunities for future research. First, to align with our research questions, we focused our investigation only on those who were employed and lived with family members. In so doing, however, we excluded employees belonging to other family structures (e.g., single employees who do not live with family members but have elder care responsibilities; Parasuraman & Greenhaus, 2002). Second, our analysis is focused on the individual level, and does not consider couple-level (e.g., Hammer, Bauer, & Grandey, 2003) or work group-level (e.g., Bhave, Kramer, & Glomb, 2010) effects. Third, we rely primarily on employees' reflections of their work–home enrichment, and do not consider data from their significant others (e.g., spouse/partner; Song, Foo, & Uy, 2008). Considering the role of alternate family structures, different levels of analysis, and significant other reports of work–home enrichment represent opportunities for future research.

In our theorizing, we focused on the affective path to work–home enrichment by considering state vitality as a focal mechanism. Yet, the positive and statistically significant total effect of occupational interactional requirements on work–home enrichment, which we observed in Study 2, provides empirical evidence indicative of the instrumental path to work–home enrichment. This suggests that the skills employees gain in performing interactive work can be directly utilized to improve their performance in the home domain (e.g., by effectively managing family interactions; Greenhaus & Powell, 2006). Results also indicate, however, that there is a decrease in the magnitude of the direct effect of occupational interactional requirements on work–home enrichment after including the mediator of state vitality. The mediation effect size index indicates that approximately a quarter of the total effect of occupational interactional requirements on work–home enrichment is accounted for by the indirect effect via state vitality. This decrease in the size of the direct effect, and the statistical significance of the indirect effect, highlight the importance of the affective path (Hayes, 2009; Wen & Fan, 2015). Furthermore, results of Study 3 provide additional empirical support for the affective path. Nevertheless, future research could further investigate the salience of these alternate paths.

Finally, we were unable to identify the motives behind the allocation of time to different activities. For instance, it is plausible that some employees may consider housework to be a resource-replenishing activity, and leisure to be a resource-draining activity. Time use researchers, however, would generally disagree with such a categorization (e.g., Bianchi, 2011; Krueger, 2007). Furthermore, our results for employees' subjective well-being indicate that they report higher levels of happiness and lower levels of stress when they are engaging in leisure activities compared to when they are performing housework activities. These results are consistent with time use research (e.g., Aguiar & Hurst, 2007), and with conceptualizations of work–family enrichment (Greenhaus & Powell, 2006). Nevertheless, future research could consider the possibility of individual differences in time allocation motives (e.g., identity or utilitarian motives; Rothbard & Edwards, 2003), and the possibility that different activities might vary in their motivating potential (e.g., intrinsic or extrinsic; ten Brummelhuis & Trougakos, 2014). Doing so would also help in more clearly delineating the strength of the substitution effect relative to the supplementation one.

Future research could additionally explore two further avenues. First, because occupations influence how work is structured, performed, and experienced by employees (Morgeson et al., 2010), they may trigger specific values that shape employee behavior (Dierdorff & Morgeson, 2013). Thus, for instance, occupations that are typified by values of high altruism (“foster harmony and service to others”; e.g., nurses, childcare workers) and high status (“provide advancement, recognition, and prestige”; e.g., chief executives, lawyers) (Dierdorff & Morgeson, 2013: 690) could reinforce occupational interactional requirements that are more cooperative and perceived to be of higher importance. In such high-altruism and high-status occupations, the effect of occupational interactional requirements on state vitality could be stronger, and thus result in higher work–home enrichment; conversely, the effect could be weaker in occupations that are typified by low altruism and low status. Second, future research could identify more granular measures of housework than the one from the ATUS that we used in our study, to shed light on the time allocated to different housework activities based on resource use. Relatedly, future research could also examine the effects of occupational interactional requirements on other relevant activities in the nonwork and home domains such as volunteering (e.g., Rodell, 2013).

### Practical Implications

Work–home enrichment is crucial for employee work engagement. Research by Sonnentag and colleagues (Sonnentag, 2003; Sonnentag, Binnewies, & Mojza, 2008) has provided evidence on how recovery at home is energizing for employees, and instrumental in improving employees’ mood for engaging in desirable workplace behaviors and in enhancing their work engagement the next day. Our study thus informs how workplace interactions can be generative and beneficial for life at home, which, in turn, can be beneficial for subsequent days at work. As such, our findings offer an alternative lever for organizations to facilitate employees’ recovery, enrich their lives at home, and spur their work engagement.

Organizations could therefore design practices that enable employees to derive value from workplace interactions. One way to do so could be to increase the meaningfulness of the connection between the interaction partners by, for instance, communicating the significance of employees’ jobs

and the impact they have on the beneficiaries of their work (see Grant, 2008). A second approach could involve training employees to schedule their work activities such that they sequence resource-replenishing workplace interactions after resource-draining activities (Beal et al., 2005; Lilius, 2012). Scheduling positive interactions (e.g., a manager organizing a meeting to appreciate team members, a salesperson making a sales call with a loyal customer, a doctor visiting a patient whose health is improving) toward the end of the workday could boost vitality resources, which could then be transferred and utilized at home. In a similar vein, a related approach could be to utilize reflective experiences (e.g., Bono, Glomb, Shen, Kim, & Koch, 2013) by asking employees to reflect on their positive interactions during the workday before they leave for home so as to trigger a reservoir of vitality resources that could be utilized at home.

In conclusion, through three separate studies and supplementary analyses, we illustrate the other side of occupational interactional requirements, and show that workplace interactions result in a reallocation of time in the home domain from resource-replenishing to resource-draining activities, thereby contributing to work–home enrichment. Workplace interactions are an important precursor to vitality resources, and could be fruitfully leveraged by organizations to enhance employee well-being both at work and at home. By identifying the utility of occupational interactional requirements to employee well-being, our study clarifies that workplace interactions need not be considered as universally negative, and presents a more comprehensive—and complementary—model for researchers and practitioners.

### REFERENCES

- Aguilar, M., & Hurst, E. 2007. Measuring leisure: The allocation of time over five decades. *The Quarterly Journal of Economics*, 122: 969–1006.
- Ashforth, B. E., & Humphrey, R. H. 1993. Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18: 88–115.
- Ashforth, B. E., & Humphrey, R. H. 2013. Emotional labor: Looking back nearly 20 years. In A. A. Grandey, J. M. Diefendorff & D. E. Rupp (Eds.), *Emotional labor in the 21st century: Diverse perspectives on emotion regulation at work*: 276–281. New York, NY: Psychology Press/Routledge.
- Ashkanasy, N. M., & Daus, C. S. 2013. Emotional labor across five levels of analysis: Past, present, future. In

- A. A. Grandey, J. M. Diefendorff & D. E. Rupp (Eds.), *Emotional labor in the 21st century: Diverse perspectives on emotion regulation at work*: 282–288. New York, NY: Psychology Press/Routledge.
- Bakker, A. B., Oerlemans, W. G. M., & ten Brummelhuis, L. L. 2013. Becoming fully engaged in the workplace: What individuals and organizations can do to foster work engagement. In R. J. Burke & C. L. Cooper (Eds.), *The fulfilling workplace: The organization's role in achieving individual and organizational health*: 55–69. Farnham, U.K.: Gower.
- Baumeister, R. F., Vohs, K. D., & Tice, D. M. 2007. The strength model of self-control. *Current Directions in Psychological Science*, 16: 351–355.
- Beal, D. J., & Weiss, H. M. 2003. Methods of ecological momentary assessment in organizational research. *Organizational Research Methods*, 6: 440–464.
- Beal, D. J., Weiss, H. M., Barros, E., & MacDermid, S. M. 2005. An episodic process model of affective influences on performance. *The Journal of Applied Psychology*, 90: 1054–1086.
- Bhave, D. P., & Glomb, T. M. 2009. Emotional labor demands, wages, and gender: A within-person, between-jobs study. *Journal of Occupational and Organizational Psychology*, 82: 683–707.
- Bhave, D. P., & Glomb, T. M. 2016. The role of occupational emotional labor requirements on the surface acting–job satisfaction relationship. *Journal of Management*, 42: 722–741.
- Bhave, D. P., Kramer, A., & Glomb, T. M. 2010. Work Family Conflict in Workgroups: Crossover, Support, and Demographic Dissimilarity. *The Journal of Applied Psychology*, 95: 145–158.
- Bianchi, S. M. 2011. Family change and time allocation in American families. *The ANNALS of the American Academy of Political and Social Science*, 638: 21–44.
- Bolger, N., & Laurenceau, J. 2013. *Intensive longitudinal methods*. New York, NY: The Guilford Press.
- Bono, J. E., Glomb, T. M., Shen, W., Kim, E., & Koch, A. 2013. Building positive resources: Effects of positive events and positive reflection on work stress and health. *Academy of Management Journal*, 56: 1601–1627.
- Brotheridge, C. M., & Grandey, A. A. 2002. Emotional labor and burnout: Comparing two perspectives of “people work.” *Journal of Vocational Behavior*, 60: 17–39.
- Brotheridge, C. M., & Lee, R. T. 2002. Testing a conservation of resources model of the dynamics of emotional labor. *Journal of Occupational Health Psychology*, 7: 57–67.
- Bureau of Labor Statistics. 2016a. *American Time Use Survey user's guide: Understanding ATUS 2003 to 2015*. Available at: <https://www.bls.gov/tus/#documents/>
- Bureau of Labor Statistics. 2016b. *American Time Use Survey: Examples of how ATUS data are being used in research*. Retrieved from <http://www.bls.gov/tus/research.htm>
- Butts, M. M., Becker, W. J., & Boswell, W. R. 2015. Hot buttons and time sinks: The effects of electronic communication during nonwork time on emotions and work–nonwork conflict. *Academy of Management Journal*, 58: 763–788.
- Byron, K. 2005. Antecedents of work–family conflict: A review and meta-analysis. *Journal of Vocational Behavior*, 67: 169–198.
- Carlson, D. W., Kacmar, K. M., Wayne, J. H., & Grzywacz, J. G. 2006. Measuring the positive side of the work–family interface: Development and validation of a work–family enrichment scale. *Journal of Vocational Behavior*, 68: 131–164.
- Craig, L., & Mullan, K. 2012. Shared parent–child leisure time in four countries. *Leisure Studies*, 31: 211–229.
- Crouter, A. C., Head, M. R., McHale, S. M., & Tucker, C. J. 2004. Family time and the psychosocial adjustment of adolescent siblings and their parents. *Journal of Marriage and the Family*, 66: 147–162.
- Curley, C., & Royle, T. 2013. The degradation of work and the end of the skilled emotion worker at Aer Lingus: Is it all trolley dollies now? *Work, Employment and Society*, 27: 105–121.
- Dahm, P. C., Glomb, T. M., Manchester, C. F., & Leroy, S. 2015. Work–family conflict, ego depletion, and self-discrepant time allocation at work. *The Journal of Applied Psychology*, 100: 767–792.
- Dalal, R. S., Bhave, D. P., & Fiset, J. 2014. Within-person variability in job performance: A theoretical review and research agenda. *Journal of Management*, 40: 1396–1436.
- Diener, E. 2000. Subjective well-being. *The American Psychologist*, 55: 34–43.
- Dierdorff, E. D., & Morgeson, F. P. 2013. Getting what the occupation gives: Exploring multilevel links between work design and occupational context. *Personnel Psychology*, 66: 687–721.
- Dimotakis, N., Scott, B. A., & Koopman, J. 2011. An experience sampling investigation of workplace interactions, affective states, and employee well-being. *Journal of Organizational Behavior*, 32: 572–588.
- Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. 2005. Work and family research in IO/OB: Content analysis and review of the literature (1980–2002). *Journal of Vocational Behavior*, 66: 124–197.

- Eby, L. T., Maher, C. P., & Butts, M. M. 2010. The intersection of work and family life: The role of affect. *Annual Review of Psychology*, 61: 599–622.
- Edwards, J. R., & Rothbard, N. P. 2000. Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review*, 25: 178–199.
- Egloff, B., Tausch, A., Kohlmann, C., & Krohne, H. W. 1995. Relationships between time of day, day of the week, and positive mood: Exploring the role of the mood measure. *Motivation and Emotion*, 19: 99–110.
- Gabriel, A. S., & Diefendorff, J. M. 2015. Emotional labor dynamics: A momentary approach. *Academy of Management Journal*, 58: 1804–1825.
- Gagné, M., & Deci, E. L. 2005. Self-determination theory as a new framework for understanding organizational behavior. *Journal of Organizational Behavior*, 26: 331–362.
- Glomb, T. M., Kammeyer-Mueller, J. D., & Rotundo, M. 2004. Emotional labor demands and compensating wage differentials. *The Journal of Applied Psychology*, 89: 700–714.
- Grandey, A. A., Diefendorff, J. M., & Rupp, D. E. 2013. Bringing emotional labor into focus: A review and integration of three research lenses. In A. A. Grandey, J. M. Diefendorff & D. E. Rupp (Eds.), *Emotional labor in the 21st century: Diverse perspectives on emotion regulation at work*: 3–27. New York, NY: Psychology Press/Routledge.
- Grandey, A. A., & Gabriel, A. S. 2015. Emotional labor at a crossroads: Where do we go from here? *Annual Review of Organizational Psychology and Organizational Behavior*, 2: 323–349.
- Grandey, A. A., Kern, J. H., & Frone, M. R. 2007. Verbal abuse from outsiders versus insiders: Comparing frequency, impact on emotional exhaustion, and the role of emotional labor. *Journal of Occupational Health Psychology*, 12: 63–79.
- Grandey, A. A., Rupp, D., & Brice, W. N. 2015. Emotional labor threatens decent work: A proposal to eradicate emotional display rules. *Journal of Organizational Behavior*, 36: 770–785.
- Grant, A. M. 2007. Relational job design and the motivation to make a prosocial difference. *Academy of Management Review*, 32: 393–417.
- Grant, A. M. 2008. The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *The Journal of Applied Psychology*, 93: 108–124.
- Grant, A. M., & Parker, S. K. 2009. Redesign work design theories: The rise of relational and proactive perspectives. *The Academy of Management Annals*, 3: 317–375.
- Greenhaus, J. H., & Powell, G. N. 2006. When work and family are allies: A theory of work–family enrichment. *Academy of Management Review*, 31: 72–92.
- Greguras, G. J., & Diefendorff, J. M. 2010. Why does proactive personality predict employee life satisfaction and behaviors? A field investigation of the mediating role of the self-concordance model. *Personnel Psychology*, 63: 539–560.
- Gronau, R. 1977. Leisure, home production and work: The theory of the allocation of time revisited. *Journal of Political Economy*, 85: 1099–1124.
- Halbesleben, J. R. B., Neveu, J. P., Paustian-Underdahl, S. C., & Westman, M. 2014. Getting to the COR: Understanding the role of resources in conservation of resources theory. *Journal of Management*, 40: 1334–1364.
- Hammer, L. B., Bauer, T. N., & Grandey, A. A. 2003. Work–family conflict and work-related behaviors. *Journal of Business and Psychology*, 17: 419–436.
- Hammermesh, D. S., Frazis, H., & Stewart, J. 2005. Data watch: The *American Time Use Survey*. *The Journal of Economic Perspectives*, 19: 221–232.
- Hancox, R. J., Milne, B. J., & Poulton, R. 2004. Association between child and adolescent television viewing and adult health: A longitudinal birth cohort study. *Lancet*, 364: 257–262.
- Harrison, S. H., & Wagner, D. T. 2016. Spilling outside the box? The effects of creative behavior at work on time spent with spouse at home. *Academy of Management Journal*, 59: 841–859.
- Hayes, A. F. 2009. Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76: 408–420.
- Hayes, A. F. 2013. *Introduction to mediation, moderation, and conditional process analysis*. New York, NY: The Guilford Press.
- Heaphy, E., & Dutton, J. E. 2008. Positive social interactions and the human body at work: Linking organizations and physiology. *Academy of Management Review*, 33: 137–162.
- Hobfoll, S. E. 1989. Conservation of resources: A new attempt at conceptualizing stress. *The American Psychologist*, 44: 513–524.
- Hochschild, A. R. 1983. *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.
- Hofmann, D. A., Griffin, M. A., & Gavin, M. B. 2000. The application of hierarchical linear modeling to organizational research. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions*: 467–511. San Francisco, CA: Jossey-Bass.



- Horrigan, M., & Herz, D. 2004. Planning, designing, and executing the BLS *American Time Use Survey*. *Monthly Labor Review*, 127: 3–19.
- Hughes, P. E. 1999. *Start early, finish strong: How to help every child become a reader*. Washington, DC: U.S. Department of Education.
- Hülshager, U. R., & Schewe, A. F. 2011. On the costs and benefits of emotional labor: A meta-analysis of three decades of research. *Journal of Occupational Health Psychology*, 16: 361–389.
- Humphrey, R. H., Ashforth, B. E., & Diefendorff, J. M. 2015. The bright side of emotional labor. *Journal of Organizational Behavior*, 36: 749–769.
- Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. 2007. Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *The Journal of Applied Psychology*, 92: 1332–1356.
- Ilies, R., Schwind, K. M., Wagner, D. T., Johnson, M., DeRue, D. S., & Ilgen, D. R. 2007. When can employees have a family life? The effects of daily workload and affect on work–family conflict and social behaviors at home. *The Journal of Applied Psychology*, 92: 1368–1379.
- Johns, G. 2006. The essential impact of context on organizational behavior. *Academy of Management Review*, 31: 386–408.
- Judge, T. A., Scott, B. A., & Ilies, R. 2006. Hostility, job attitudes, and workplace deviance: Test of a multi-level model. *The Journal of Applied Psychology*, 91: 126–138.
- Juster, F. T., Ono, H., & Stafford, F. P. 2004. *Changing times of American youth: 1981–2003*. Ann Arbor, MI: Institute of Social Research.
- Kammeyer-Mueller, J. D., Rubenstein, A. L., Long, D. M., Odio, M. A., Buckman, B. R., Zhang, Y., & Halvorsen-Ganepola, M. D. K. 2013. A meta-analytic structural model of dispositional affectivity and emotional labor. *Personnel Psychology*, 66: 47–90.
- Kanter, R. M. 1977. *Men and women of the corporation*. New York, NY: Basic Books.
- Karabanow, J. 1999. When caring is not enough: Emotional labor and youth shelter workers. *The Social Service Review*, 73: 340–357.
- Kim, E., Bhave, D. P., & Glomb, T. M. 2013. Emotion regulation in workgroups: The roles of demographic diversity and relational work context. *Personnel Psychology*, 66: 613–644.
- Kimmel, J., & Connelly, R. 2007. Mothers' time choices: Caregiving, leisure, home production, and paid work. *The Journal of Human Resources*, 42: 643–681.
- Krueger, A. B. 2007. Are we having more fun yet? Categorizing and evaluating changes in time allocation. *Brookings Papers on Economic Activity*, 2: 193–215.
- Krueger, A. B., Kahneman, D., Fischler, C., Schkade, D., Schwarz, N., & Stone, A. A. 2009. Time use and subjective well-being in France and the U.S. *Social Indicators Research*, 93: 7–18.
- Kühnel, J., & Sonnentag, S. 2011. How long do you benefit from vacation? A closer look at the fade-out of vacation effects. *Journal of Organizational Behavior*, 32: 125–143.
- Leidner, R. 1993. *Fast food, fast talk: Service work and the routinization of everyday life*. Berkeley, CA: University of California Press.
- LePine, J. A., Podsakoff, N. P., & LePine, M. A. 2005. A meta-analytic test of the challenge stressor–hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of Management Journal*, 48: 764–775.
- Lilius, J. M. 2012. Recovery at work: Understanding the restorative side of “depleting” client interactions. *Academy of Management Review*, 37: 569–588.
- Lively, K. J. 2000. Reciprocal emotion management: Working together to maintain stratification in private law firms. *Work and Occupations*, 27: 32–63.
- Lykken, T. 1968. Statistical significance in psychological research. *Psychological Bulletin*, 70: 151–159.
- Moen, P. 1989. *Working parents*. Madison, WI: University of Wisconsin Press.
- Morgeson, F. P., Dierdorff, E. C., & Hmurovic, J. L. 2010. Work design in situ: Understanding the role of occupational and organizational context. *Journal of Organizational Behavior*, 31: 351–360.
- Muthén, L. K., & Muthén, B. O. 2010. *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. 2009. Instructional manipulation checks: Detecting satiating to increase statistical power. *Journal of Experimental Social Psychology*, 45: 867–872.
- Parasuraman, S., & Greenhaus, J. H. 2002. Toward reducing some critical gaps in work–family research. *Human Resource Management Review*, 12: 299–312.
- Rafaeli, A. 1989. When clerks meet customers: A test of variables related to emotional expressions on the job. *The Journal of Applied Psychology*, 74: 385–393.
- Raudenbush, S. W., & Bryk, A. S. 2002. *Hierarchical linear models*. Newbury Park, CA: Sage.
- Robbins, L. 1930. On the elasticity of demand for income in terms of efforts. *Economica*, 29: 123–129.

- Rockmann, K. W., & Pratt, M. G. 2015. Contagious offsite work and the lonely office: The unintended consequences of distributed work. *Academy of Management Discoveries*, 1: 150–164.
- Rodell, J. B. 2013. Finding meaning through volunteering: Why do employees volunteer and what does it mean for their jobs? *Academy of Management Journal*, 56: 1274–1294.
- Rogers, W. H. 1993. Regression standard errors in clustered samples. *Stata Technical Bulletin*, 13: 19–23.
- Rook, J. W., & Zijlstra, F. R. H. 2006. The contribution of various types of activities to recovery. *European Journal of Work and Organizational Psychology*, 15: 218–240.
- Rothbard, N. P. 2001. Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative Science Quarterly*, 46: 655–684.
- Rothbard, N. P., & Edwards, J. R. 2003. Investment in work and family roles: A test of identity and utilitarian motives. *Personnel Psychology*, 56: 699–730.
- Ryan, R. M., & Deci, E. L. 2000. The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological Inquiry*, 11: 319–338.
- Ryan, R. M., & Deci, E. L. 2001. On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52: 141–166.
- Ryan, R. M., & Deci, E. L. 2008. From ego depletion to vitality: Theory and findings concerning the facilitation of energy available to the self. *Social and Personality Psychology Compass*, 2: 702–717.
- Ryan, R. M., & Frederick, C. M. 1997. On energy, personality and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65: 529–565.
- Scott, B. A., & Barnes, C. M. 2011. A multilevel field investigation of emotional labor, affect, work withdrawal, and gender. *Academy of Management Journal*, 54: 116–136.
- Scott, B. A., Garza, A. S., Conlon, D. E., & Kim, Y. J. 2014. Why do managers act fairly in the first place? A daily investigation of “hot” and “cold” motives and discretion. *Academy of Management Journal*, 57: 1571–1591.
- Song, Z., Foo, M., & Uy, M. A. 2008. Mood spillover and crossover among dual-earner couples: A cell phone event sampling study. *The Journal of Applied Psychology*, 93: 443–452.
- Sonnentag, S. 2001. Work, recovery activities, and individual well-being: A diary study. *Journal of Occupational Health Psychology*, 6: 196–210.
- Sonnentag, S. 2003. Recovery, work engagement, and proactive behavior: A new look at the interface between work and non-work. *The Journal of Applied Psychology*, 88: 518–528.
- Sonnentag, S., Binnewies, C., & Mojza, E. J. 2008. “Did you have a nice evening?” A day-level study on recovery experiences, sleep, and affect. *The Journal of Applied Psychology*, 93: 674–684.
- Sonnentag, S., & Fritz, C. 2007. The recovery experience questionnaire: Development and validation of a measure assessing recuperation and unwinding at work. *Journal of Occupational Health Psychology*, 12: 204–221.
- Sonnentag, S., & Zijlstra, F. R. H. 2006. Job characteristics and off-job activities as predictors of need for recovery, well-being, and fatigue. *The Journal of Applied Psychology*, 91: 330–350.
- StataCorp. 2015. *Stata statistical software: Release 14*. College Station, TX: StataCorp LP.
- ten Brummelhuis, L. L., & Bakker, A. B. 2012. A resource perspective on the work–home interface: The work–home resources model. *The American Psychologist*, 67: 545–556.
- ten Brummelhuis, L. L., & Trougakos, J. P. 2014. The recovery potential of intrinsically versus extrinsically motivated off-job activities. *Human Relations*, 87: 177–199.
- Tolich, M. 1993. Alienating and liberating emotions at work: Supermarket clerk’s performance of customer service. *Journal of Contemporary Ethnography*, 22: 361–381.
- Trougakos, J. P., & Hideg, I. 2009. Momentary work recovery: The role of within day work breaks. In S. Sonnentag, P. L. Perrewé & D. C. Ganster (Eds.), *Current perspectives on job-stress recovery*, vol. 7: 37–84. Oxford, U.K.: JAI Press.
- Trougakos, J. P., Hideg, I., Cheng, B. H., & Beal, D. J. 2014. Lunch breaks unpacked: The role of autonomy as a moderator of recovery during lunch. *Academy of Management Journal*, 57: 402–421.
- Wagner, D. T., Barnes, C. M., & Scott, B. A. 2014. Driving it home: How workplace emotional labor harms employee home life. *Personnel Psychology*, 67: 487–516.
- Wang, R., & Bianchi, S. M. 2009. ATUS father’s involvement in childcare. *Social Indicators Research*, 93: 141–145.
- Wayne, J., Grzywacz, J. G., Carlson, D. S., & Kacmar, M. 2007. Work–family facilitation: A theoretical explanation and model of antecedents and consequences. *Human Resource Management Review*, 17: 63–76.
- Wen, Z., & Fan, X. 2015. Monotonicity of effect sizes: Questioning kappa-squared as mediation effect

- size measure. *Psychological Methods*, 20: 193–203.
- Westman, M., & Eden, D. 1997. Effects of a respite from work on burnout: Vacation relief and fade-out. *The Journal of Applied Psychology*, 82: 516–527.
- Wharton, A. S. 1993. The affective consequences of service work. Managing emotions on the job. *Work and Occupations*, 20: 205–232.
- Wharton, A. S. 2009. The sociology of emotional labor. *Annual Review of Sociology*, 35: 147–165.
- Wharton, A. S. 2013. Back to the future. In A. A. Grandey, J. M. Diefendorff & D. E. Rupp (Eds.), *Emotional labor in the 21st century: Diverse perspectives on emotion regulation at work*: 300–305. New York, NY: Psychology Press/Routledge.
- Wharton, A. S., & Erickson, R. 1993. Managing emotions on the job and at home: Understanding the consequences of multiple emotional roles. *Academy of Management Review*, 18: 457–486.
- Wight, V. R., Raley, S. B., & Bianchi, S. M. 2008. Time for children, one's spouse and oneself among parents who work nonstandard hours. *Social Forces*, 87: 243–271.
- Wooldridge, J. M. 2002. *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.



**Devasheesh P. Bhave** (dbhave@smu.edu.sg) is an associate professor of organisational behavior and human resources at the Lee Kong Chian School of Business, Singapore Management University. He received his PhD from the Carlson School of Management at the University of Minnesota. His research interests include dynamic processes of affect and performance, emotional labor and customer service, and the work–home interface.

**Alexandru M. Lefter** (alex.lefter@concordia.ca) is an assistant professor in the Department of Management at the John Molson School of Business at Concordia University. He received his PhD in human resources and industrial relations from the Carlson School of Management at the University of Minnesota. His current research interests include workplace interactions, work and family, and unemployment and unemployment insurance.

